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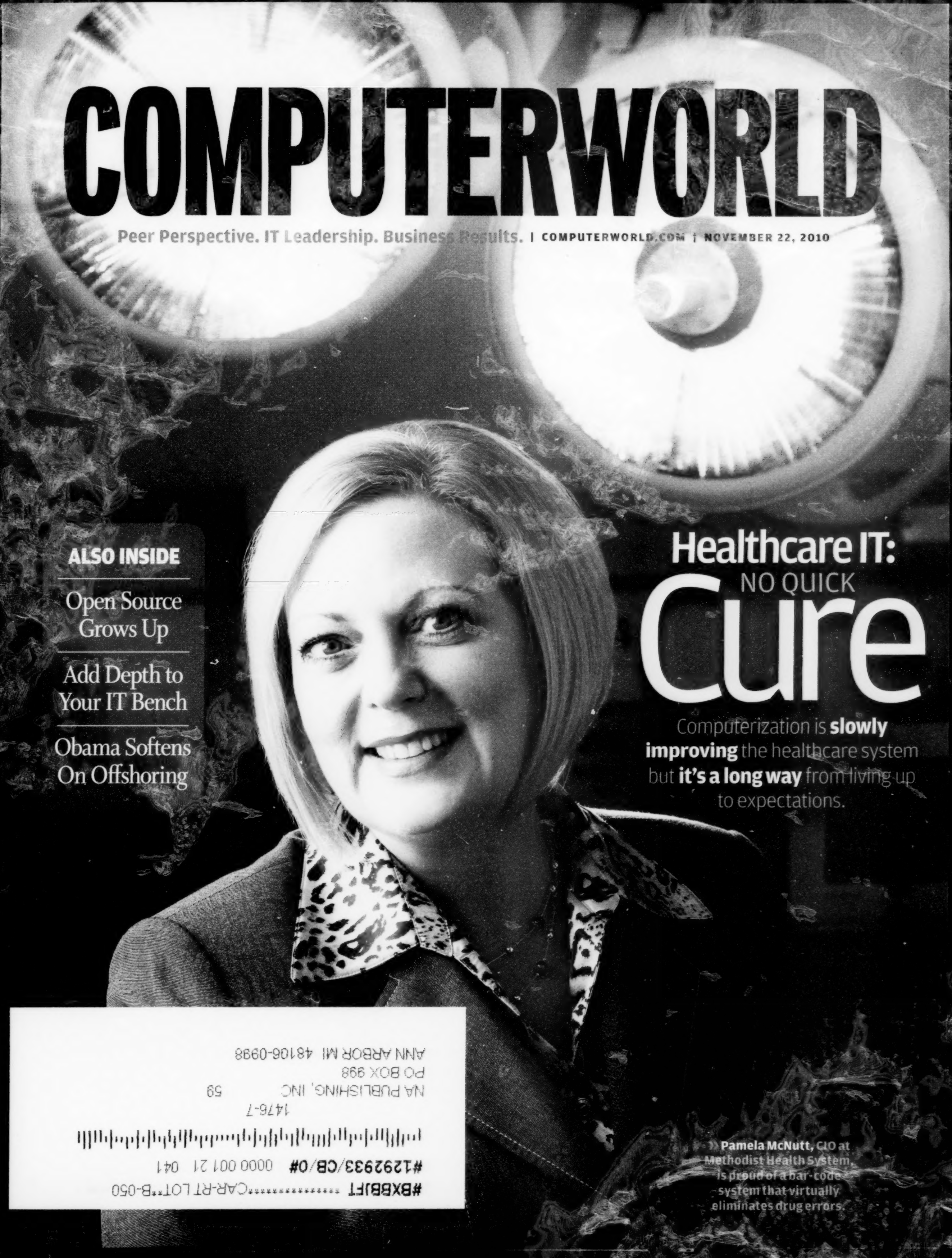

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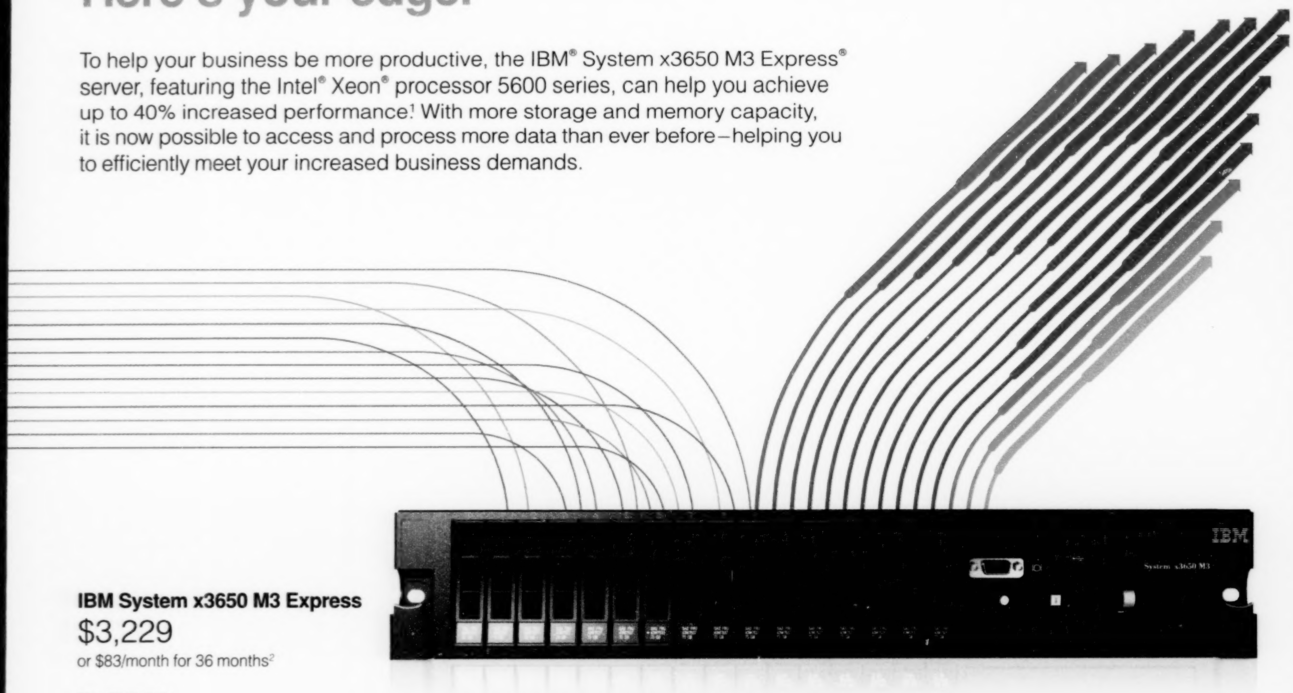

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HOW TO ADD DEPTH TO YOUR BENCH

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COVER STORY

Healthcare IT: No Quick Cure

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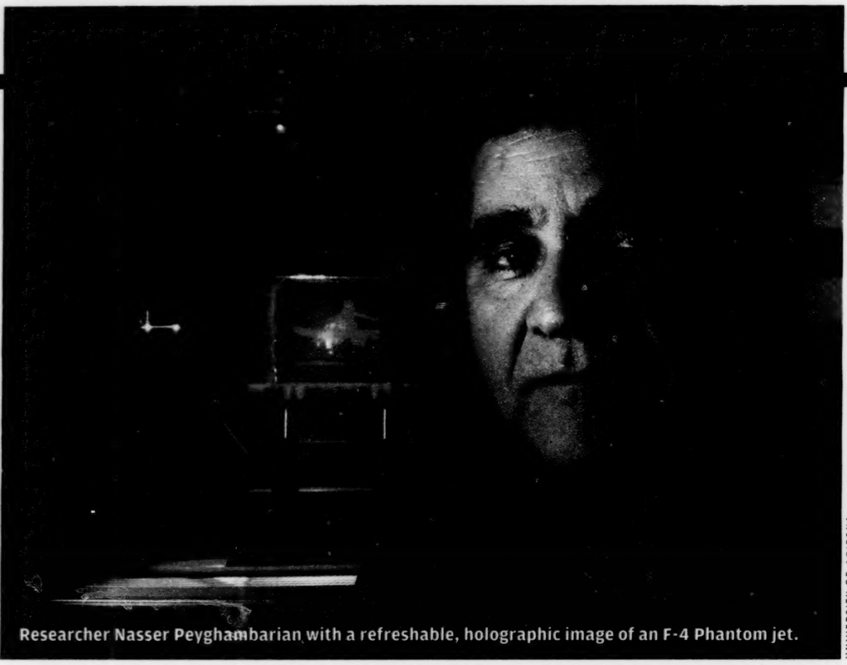

Researcher Nasser Peyghambarian with a refreshable, holographic image of an F-4 Phantom jet.

UNIVERSITY OF ARIZONA

FUTURE WATCH

Holograms Will Give Video a 3D Look

UNIVERSITY OF ARIZONA scientists have developed a holographic telepresence system that projects a 3D, full-color, moving image — but doesn't require viewers to wear special glasses to see the image properly.

"Let's say I want to give a presentation in New York. All I need is an array of cameras in my Tucson office and a fast Internet connection. At the other end, in New York, there would be a 3D display using our laser system," said optical sciences professor Nasser Peyghambarian in a statement.

A prototype of the holographic technology records an image with an array of regular video cameras, each one viewing the object from a different angle. Then it uses fast-pulsed laser beams to create holographic, or 3D, pixels. Those pixels are the building blocks of the images, according to the university.

Pierre-Alexandre Blanche, an assistant research professor at the university, said the key development is "a screen made of a novel photorefractive material, capable of refreshing holograms every two seconds, making it the first to achieve a speed that can be described as quasi-real-time."

Telepresence systems are gaining popularity among large corporations that want to cut down on travel, and holographic technology would enhance the telepresence experience by adding 3D graphics. The new technology could, for example, allow people to see a new-product prototype in 3D before spending money to build it, said Dan Olds, an analyst at Gabriel Consulting Group Inc.

– Sharon Gaudin

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DATA CENTERS

Spot Market Offers Low-Cost Cloud Capacity

Enomaly Inc. has launched an online market called SpotCloud where users can shop for low-cost, no-frills computing power from various cloud service providers.

The company, whose primary business is selling software to cloud providers, came up with the idea to create a spot market as a way to help cloud service vendors sell off unused capacity.

There are currently 15 cloud providers that offer their excess capacity through SpotCloud. Enomaly is offering the service as a private beta to make sure that it can handle requests. Users must register and be approved before they can purchase services.

Once approved, buyers can visit the online market and enter details about the kinds of services they're seeking. For instance, they can designate a region or even a city where they want the computing power to be hosted, choose hardware requirements in terms of RAM and CPU, and specify the price they want to pay, which will vary depending on the quality of service.

The idea is to offer users a straightforward virtual machine at a discount price. "If you want all the bells and whistles, you can go to Amazon and get it and pay retail for it," said Reuven Cohen, founder and chief technologist at Enomaly.

– NANCY GOHRING, IDG NEWS SERVICE

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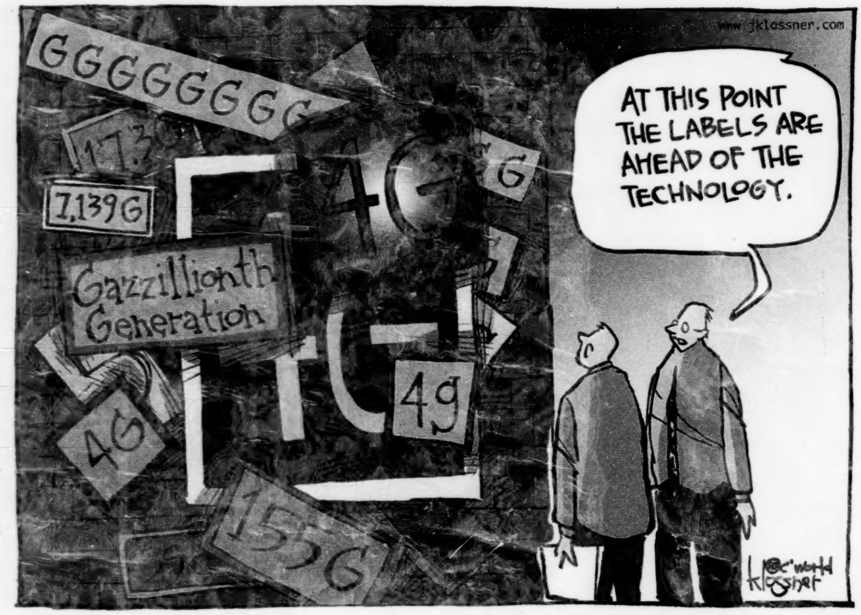
BETWEEN THE LINES
By John Klossner



WIRELESS NETWORKING

4G Turning Into 'Meaningless' Moniker

THE TERM 4G wireless literally refers to fourth-generation wireless technology, but apparently there's not much else that buyers can count on when it comes to the 4G label.

T-Mobile USA this month reignited the debate over the definition of a 4G network when it launched TV ads claiming that it operates "America's largest 4G network."

Competitors said that T-Mobile's High-Speed Packet Access (HSPA+) network shouldn't be described as either "next generation" or 4G at all. In fact, T-Mobile last summer was calling basically the same HSPA+ network "the fastest 3G network."

"I'm afraid that carriers desperate for one-upmanship will make 4G a meaningless technical term," said Gartner Inc. analyst Ken Dulaney. "All it's going to mean is that it's faster than the last network you were on."

T-Mobile defended its use of the term 4G.

"What we're selling today is clearly the equivalent or the better of what's being marketed today as 4G," said Mark McDiarmid, senior director of engineering at T-Mobile. The HSPA+ network delivers, on average, 5Mbit/sec. downstream to smartphones and 12Mbit/sec. to laptop dongles, he said.

Until recently, 4G referred to cellular networks using either WiMax or Long Term Evolution (LTE) technologies.

But the International Telecommunication Union ruled on Oct. 21 that WiMax and LTE in their current forms don't qualify as 4G. The ITU reserves that moniker for networks that achieve speeds of 100Mbit/sec., or about 10 times the performance that any carrier, including T-Mobile, can offer today.

The ITU said that the only technologies that will qualify as 4G are a future version of LTE to be called LTE-Advanced, and the next generation of WiMax, officially known as IEEE 802.16m or WirelessMAN-Advanced. Neither is expected to go live commercially until 2014 or 2015.

– Matt Hamblen and the IDG News Service's Stephen Lawson

Micro Burst

In a survey of 1,004 large enterprises,

47%

of the respondents cited "data growth" as their top challenge in the data center.

APPLICATIONS

Employees Still Flummoxed by Office's Ribbon

Four years after the debut of the "ribbon" interface in Microsoft's Office suite, businesses are still leery of it, a recent poll found.

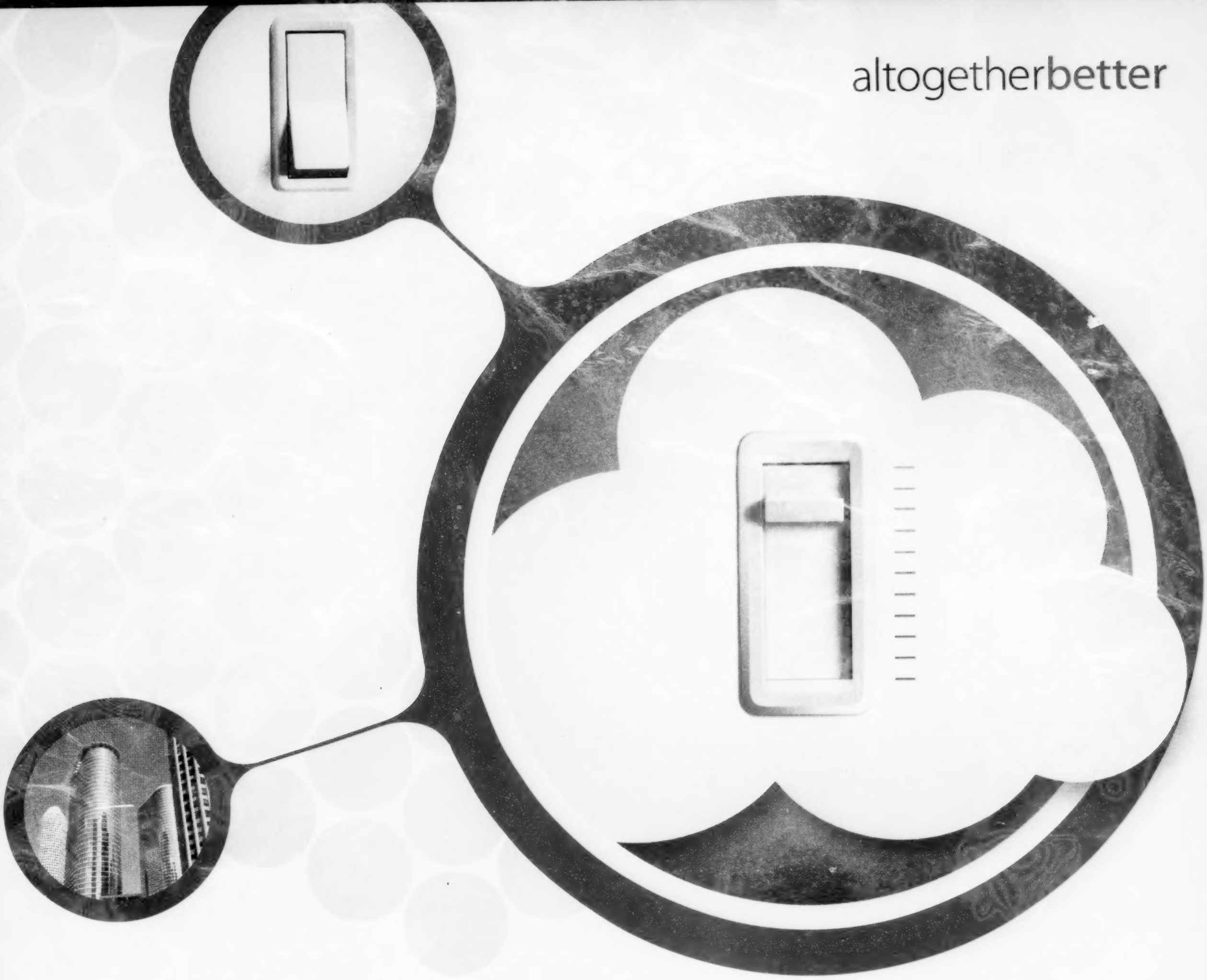
The interface, which first appeared in Office 2007, features a wide, ribbon-like display at the top, replacing the drop-down menus, small icons and toolbars Windows applications have had for decades.

Forty-five percent of the more than 950 IT executives, managers and staffers Dimensional Research surveyed identified user training on the ribbon as a concern, said analyst Diane Hagglund. That's more than double the percentage who said they were worried about the software's stability and reliability, and significantly higher than the percentage who voiced concerns over non-ribbon training issues and add-on compatibility problems.

Despite Microsoft's claims that training issues are overblown, users still knock the ribbon in Office 2010, which came out months ago, and the just-shipped Office for Mac 2011.

Only 20% of the organizations polled have rolled out Office 2010 so far, noted Hagglund, who pointed to increased complexity on the desktop as a potential reason for the delay. "It's just getting tougher and tougher" for IT staffs, she said.

– GREGG KEIZER



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President Barack Obama meets members of the audience after speaking at the U.S.-India business council and entrepreneurship summit in Mumbai, India, on Nov. 6.

REUTERS/JASON REED

Obama Softens His Stance on Offshoring

During a visit to India, the president emphasizes how outsourcing can benefit businesses and workers in both countries. By Patrick Thibodeau and John Ribeiro

PRESIDENT BARACK OBAMA this month took steps to allay concerns expressed by India's government and its IT industry that the U.S. would enact protectionist measures in response to fears that offshoring is a cause of American job losses.

Indian leaders have been on edge since Congress raised the fees for H-1B visas, and many midterm election candidates pummeled opponents for apparently supporting outsourcing.

During a visit to India earlier this month, Obama described the perception that Indian call centers and back-office operations threaten U.S. jobs as an old stereotype that ignores the reality that trade between the countries creates jobs in both.

Instead of complaining about jobs moving to Bangalore, as he did in remarks on tax code changes in May, Obama emphasized to India's leaders how trade can help both nations. "I want both the citizens in the United States and citizens in India to understand the benefits of commercial ties between the two countries," he said.

Indian Prime Minister Manmohan Singh added that "India is not in the business of stealing jobs from the United States."

Obama told a gathering of executives in Mumbai that U.S. exports to India have quadrupled in recent years and now support tens of thousands of U.S. manufacturing jobs.

Those messages were in sharp contrast to the views that other U.S. politicians have expressed recently.

In August, Ohio Gov. Ted Strickland signed an executive order prohibiting state agencies from contracting with any company that offshores a state service. And strong anti-offshoring rhetoric helped Sens. Barbara Boxer (D-Calif.) and Harry Reid (D-Nev.) win re-election.

With the election over, though, Obama has signaled a willingness to avoid piling restrictions on offshoring and the H-1B visa program. And Congress' upcoming lame-duck session could give H-1B supporters an opportunity to make gains, particularly through amendments tacked onto pending appropriations bills.

India is seeking a number of things from U.S. lawmakers. Among them is the creation of a service visa, apart from the H-1B, that could be used by companies that offer IT services. India would also like a so-called totalization agreement that would end the need for Indian visa workers to pay Social Security and Medicare taxes.

Ron Hira, an associate professor of public policy at the Rochester Institute of Technology, said Obama accomplished what he set out to do in India, which was to "appease business leaders" in both countries. "This shouldn't have taken anyone by surprise, since Obama and his economic team have never taken offshoring seriously," Hira said. "He's been in office two years and took no actions on offshoring, in spite of a few speeches." ◆

Ribeiro *is a reporter for the IDG News Service.*

This shouldn't have taken anyone by surprise, since Obama and his economic team have never taken offshoring seriously. [illegible] ASSOCIATE PROFESSOR OF PUBLIC POLICY, ROCHESTER INSTITUTE OF TECHNOLOGY

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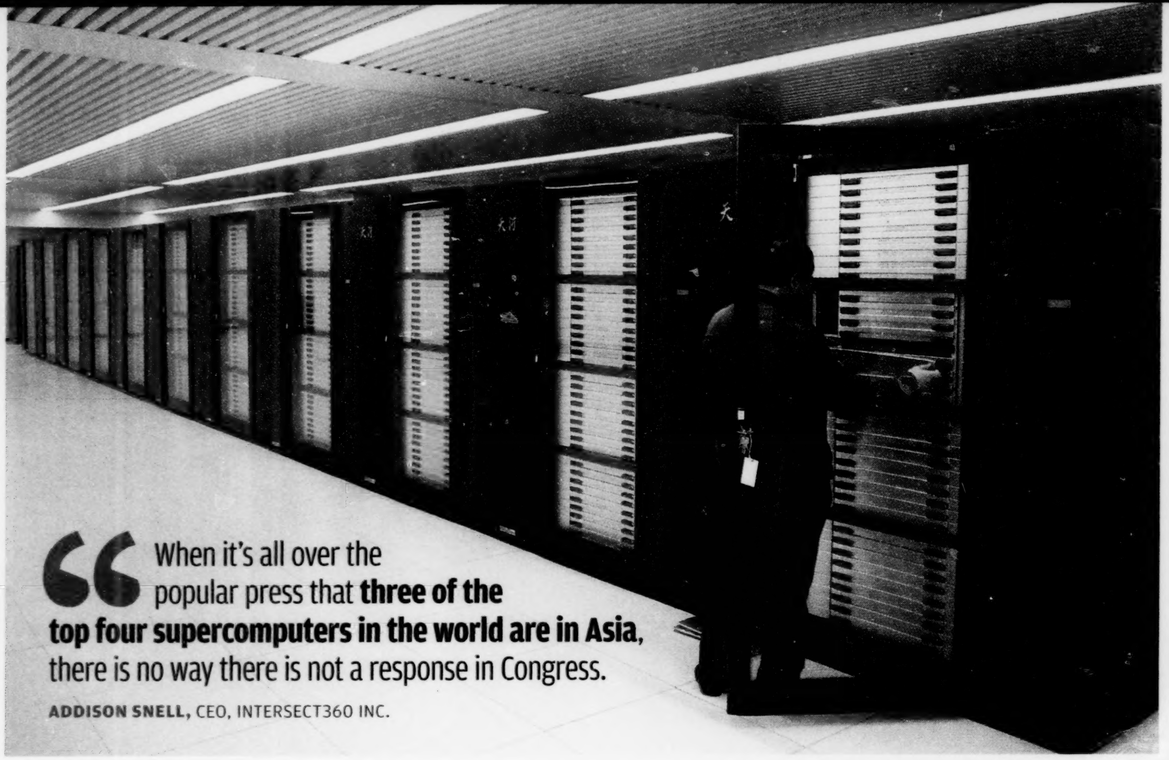

> When it's all over the popular press that **three of the top four supercomputers in the world are in Asia**, there is no way there is not a response in Congress.
>
> **ADDISON SNELL,** CEO, INTERSECT360 INC.

NEWS ANALYSIS

China Gains May Spur U.S. Supercomputing

The end of a six-year U.S. run atop the Top500 supercomputer list could persuade a cost-conscious Congress to fund new projects.

By Patrick Thibodeau and Joab Jackson

U.S. DOMINANCE of supercomputer development is being heavily challenged for the first time in years, with Chinese-built systems ranked first and third in the latest Top500 list of the most powerful systems.

Analysts say the timing of the U.S.'s fall from the top of the biannual list after a six-year run could prove beneficial to various federal agencies looking for public monies to fund supercomputer projects in the midst of a cost-cutting climate in Washington.

"When it's all over the popular press that three of the top four supercomputers in the world are in Asia, there is no way there is not a response in Congress," said Addison Snell, CEO of InterSect360 Inc., a Sunnyvale, Calif.-based high-performance computing research group.

The latest Top500 list, released last week, is led by the 2.5-petaflop Tianhe-1A supercomputer built at China's Tianjin National Supercomputer Center. Next is the Oak Ridge, Tenn., Leadership Computing Facility's Cray XT5 Jaguar system, which clocked in at 1.75 petaflops, followed by systems built in China and Japan.

On the plus side for the U.S., 275 of the 500 top systems were built here, compared with 42 in China.

The Top500 list is compiled by researchers at the University of Mannheim, Germany; the U.S. Department of Energy's Lawrence Berkeley National Laboratory; and the University of Tennessee, Knoxville.

Experts wouldn't speculate on how the new Congress will react to China's growing supercomputer prowess, though some noted that economic arguments alone should convince lawmakers to fund new projects.

"Governments are recognizing that the deployment of this technology is a prerequisite to sustaining economic competitiveness," said David Turek, vice president of deep computing at IBM. "It lets you do better product designs, basic research, life sciences, fundamental research in materials."

IDC analyst Earl Joseph noted that the Chinese government is building 14 petascale computing centers "because they recognize the competitive value." Even Russia realizes that the goods it creates won't be as competitive without high-performance computing, he added, citing Russian President Dmitry Medvedev's scalding criticism last year of its lagging supercomputer development.

The U.S. isn't standing still either. In 2012, the DOE's Lawrence Livermore National Laboratory plans to unveil an IBM Sequoia system that will exceed 20 petaflops, and its Argonne National Lab is expected to finish its next-generation IBM Blue Gene supercomputer, which will perform at up to 10 petaflops. ◆

Jackson *is a reporter for the IDG News Service.*

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THE Grill

Brenda Decker

This state CIO brings a no-nonsense approach to an arduous job.

Family: A husband, three adult children, their spouses and seven grandchildren.

Most interesting thing people don't know about you: I cut and hang drywall. I enjoy home remodeling projects.

What futuristic technology would you love to see become reality? Cloning, because I need two of me.

What do you do in your spare time? A lot of reading. Anything from technology-related books and magazines to just about any type of novel. I love mysteries, action thrillers.

Are you a Huskers football fan? Absolutely. I'm sitting right now in red with my Huskers pin on.

*B**RENDA DECKER** has worked for the state of Nebraska for more than 30 years and has spent the past five as the state's CIO, so she knows how important IT has become to delivering government services. And she knows how to get the job done on a tight budget. It's a daunting task, because Decker oversees an organization that provides technology services to state agencies as well as to cities, towns, counties and schools. During her tenure, Decker has led critical improvements in IT, such as a large-scale e-mail consolidation project. In September, the National Association of State Chief Information Officers recognized Decker for her leadership with its annual Meritorious Service Award.*

The CIO's office lists a specific vision, mission and core values. Why articulate those in such a detailed manner? We had a networking area, we had a computing area, we had an area for IT policy. And the governor asked me as the new CIO [in 2005] to bring

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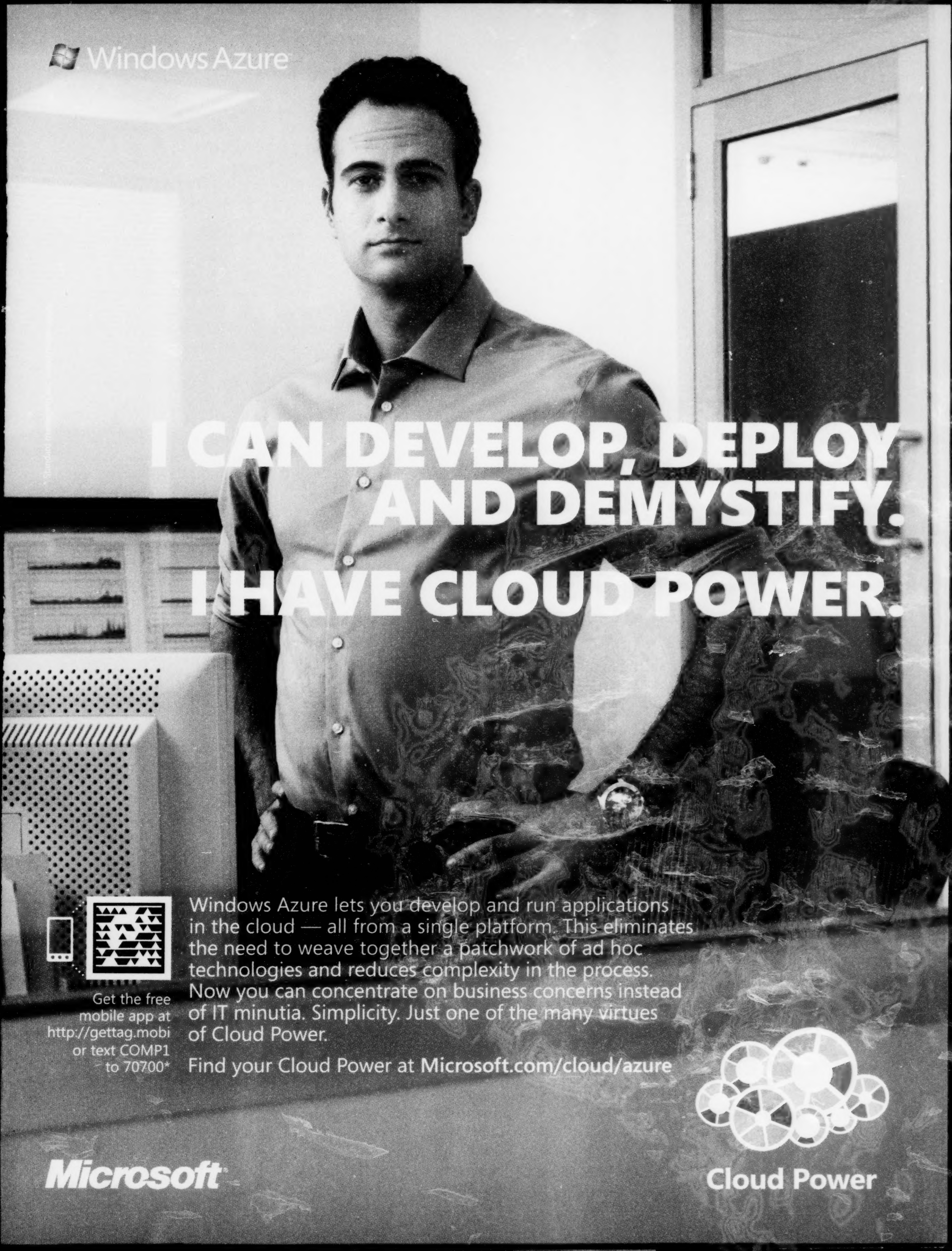
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Continued from page 10

those areas and the operational area into one entity. So we felt very strongly that we're bringing these groups of employees together who had a "been there, done that" mentality, and we wanted it to be very specific so people could see what we were shooting at rather than it be a pie-in-the-sky, this-too-shall-pass kind of thing. We felt we needed to actually say not only what we're going to do, but "Here are some specific things, and people will be held accountable for these." It was important for us that people understood we weren't just putting words out there. We were putting words out there for people to operate by.

> **It's amazing how creative people can get** when you ask for their input and say, 'Let's all work on this together.'

Your mission statement talks about "providing premier IT leadership, policy and operations." How do you define and measure "premier IT leadership"? That our customers, our client agencies, have no reason to ask anyone else to provide IT services. We measure that by asking customers, and making sure we're not hearing, "You're not doing this for me. I have to go somewhere else."

Has anyone said that they want to hire an outside IT provider? A couple of times we've had people come in and say that to us, and sometimes it makes sense. But the norm is that when they say that, we find ways to fix the issue and we retain them as a customer.

What are the biggest challenges this year? We're all looking to do more with less. But we have very large cooperative IT projects that have been started over the past two years that we needed to complete or were well on our way to completing irrespective of the budget issues. We didn't want to say, "The budget wouldn't let us complete the projects." And we had to address the budget issues at the agencies. Some agencies were looking at programs that would be cut, and we had to look at how to provide those programs more efficiently using technology.

What is your strategy to deal with that challenge? We're big believers in project management. Let's sit back and look at what milestones we have left, what do we have going on that would give us pushback, what are our barriers and risks, and actually have a brainstorming session where we say no idea is a stupid idea — throw it out there and we can decide if it's something we can use. It's amazing how creative people can get when you ask for their input and say, "Let's all work on this together."

What do you see as the biggest challenge of the next decade? One is going to be our retiring workforce. We have a lot of legacy systems that have people who can do the upgrades and maintenance, but those people are going to be retiring. We're going to have to really deal with modernization, and we're going to have to deal with how we support systems if we can't get them modernized.

How will you handle the anticipated retirements? We're trying to bring people in and pair them with people who have dealt with our legacy systems and see if we can develop the mentoring that can cross over that retirement period. We know that at some time we have to get those legacy systems replaced. But we have bought ourselves some time through the mentoring process, and we're trying to work with the agencies to help them understand that the system you developed in 1972 really needs a refresh.

Gov. Dave Heineman praised you for both your practicality and your creativity. How do you balance those? I think it's a situation where you've got to let people bring you ideas, to come up with new and exciting ways to do things. But you then need to back them up and look at that idea and ask, "How do we afford it, how do we make sure it's something palatable to our clients, and how do we move very slowly into those things and not leave behind the people who might not adopt the new technology?"

***Government Technology* magazine once named you one of the five most influential women CIOs. How do you see yourself as an influencer?** I believe that a lot of [the agencies] have looked at our organization and the changes we made and said, "They really are making a difference in how we deploy technology in the state of Nebraska." So they come to us and to me and say, "I've got this idea," and I'm able to influence how we deploy it. And I have a talent apparently in getting people into a room and able to talk to each other.

– Interview by Computerworld *contributing writer*
Mary K. Pratt *(marykpratt@verizon.net)*

OPINION

PRESTON GRALLA

Redmond Be Nimble, Redmond Be Quick

Microsoft wasn't slow to enter the mobile market, but it has been slow to recognize what consumers want.

MICROSOFT'S PAST AND FUTURE are intersecting this month, setting the company's more complacent present in stark contrast with its early, hungry days. On Nov. 8, Microsoft launched Windows Phone 7, its latest attempt to make a mark in the mobile world.

Then, less than two weeks later, on Nov. 20, it marked the 25th anniversary of the launch of Windows. In the time between the Windows 1.0 and Windows Phone 7 launches, Microsoft has changed in ways that call into question whether it will ever again be able to match its success of the past 25 years.

When Microsoft released Windows 1.0 in November 1985, it was still a young, hungry company, barely 10 years old. The product that had cemented its success, MS-DOS, had been released only four years earlier.

Microsoft was in an enviable position — young enough to easily change course and shift resources to new products, but stable enough not to face a cash-flow crunch. With a small product lineup, there was little internal red tape.

Windows 1.0 was begun in 1981 as a project called Interface Manager, and it was announced to the world in November 1983. When it finally was released two years later, not many people outside the trade press were paying attention. Windows was little more than an extension of DOS, which it had to run on top of, and offered few clear benefits. More often than not, rather than being purchased on its own, it was included as a runtime with programs like Excel.

Still, Microsoft recognized that the future of the PC was graphical, and it shifted resources to Windows, single-mindedly pursuing the new operating system even though it knew the payoff might not come for several years. Microsoft's big advantage was being nimble enough to outclass, out-program and out-market far larger companies, notably IBM. The payoff was big: Windows eventually achieved a near monopoly in the global operating systems market.

Slowing With Age

But Microsoft is nimble no more, and today it reacts to change more slowly than its competitors do. It's paying the price for that. Although Microsoft wasn't slow to enter the mobile market, it has been slow to recognize what consumers want and then to deliver it to them. The company was in the mobile market far ahead of Apple and Google, releasing an early version of its mobile operating system in 2001. Apple didn't get around to releasing the iPhone until 2007, and Google didn't release Android to phone makers until 2009. But because they paid more attention to what consumers wanted and to smartphone hardware advances, their mobile growth has been surging, while Microsoft's market share has shrunk.

Microsoft has simply not been able to develop a competitive mobile operating system until now, and it may be too late. The company certainly hasn't lacked resources, but turf wars have hampered its mobile efforts. In its earlier years, Microsoft would never have allowed competitors to take away its market. But political infighting, red tape and a diffuse focus allowed a major opportunity to slip away.

The question for Microsoft today is whether it will learn from the experiences of the past and regain that single-minded focus. If not, you can count Microsoft out of the mobile race, and what may become the world's biggest growth market. ◆

Preston Gralla is a contributing editor for *Computerworld.com* and the author of more than 35 books, including *How the Internet Works* (Que, 2006).

Healthcare IT: NO QUICK Cure

Computerization is **slowly improving** the healthcare system, but **it's a long way** from living up to expectations.

By Mary K. Pratt

[redacted]

IT'S BEEN 19 YEARS since the prestigious Institute of Medicine urged greater adoption of computer systems in healthcare, and more than six years since then-President George W. Bush declared, "By computerizing health records, we can avoid dangerous medical mistakes, reduce costs and improve care."

So, how are we doing so far?

There are positive signs at places like Methodist Dallas Medical Center, which has a nearly foolproof way to make sure the right drug gets to the right patient in the right dose at the right time: It uses bar-code technology to clear all medications through a computerized program.

REID HORN PHOTOGRAPHY

CIO **Pamela McNutt** says technology helps Methodist Health System avoid potentially lethal drug errors.

What Doctors And Nurses Want

Half of healthcare providers are using some form of electronic health record system; 34% have a comprehensive system and 16% have a partial system, according to a July survey by the Computing Technology Industry Association. Overall, 56% of doctors and nurses rated their EHR system as satisfactory, while 41% fell into the middle category of "partly satisfied/partly dissatisfied."

Top reasons healthcare providers adopt EHR systems:

1. Better patient care
2. Save time, improve efficiency
3. Reduce errors or the risk of errors
4. Improve staff productivity

Improvements doctors would like to see in EHR systems:

1. Increased speed
2. Easier to use, less complex
3. Lower cost
4. Removal of unnecessary functions
5. Greater interoperability with other systems

(TIE) Better remote access

Most commonly used EHR software features:

1. Charting
2. Scheduling
3. E-prescriptions
4. Computerized physician order entry
5. Medications management

Top reasons for not adopting EHR systems:

1. Upfront costs
2. Ongoing operational costs
3. Impact on existing workflow or processes
4. Training and user-adoption issues

SOURCE: COMPUTING TECHNOLOGY INDUSTRY ASSOCIATION SURVEY ON HEALTHCARE IT, JULY 2010

Base: 300 U.S. healthcare providers, including doctors, dentists, nurses, physician assistants and office managers; multiple responses allowed.

Pamela McNutt, CIO at Dallas-based Methodist Health System, says the technology means the hospital can avoid drug errors, which are responsible for an estimated 100,000 deaths nationwide each year.

That success encouraged McNutt to push forward with other IT initiatives. "The reason we continue getting everything into an electronic format is so we can analyze our data, look at what's going on for efficiency reasons and monitor quality as it's happening," she says. "And the only way you can do that is through the use of structured data."

While there are many success stories, progress in using IT to improve patient care and cut costs has been slow. Research suggests that healthcare IT has a long way to go to match the hype:

- Only 12% of U.S. hospitals had adopted electronic health records (EHR) as of last year, a modest increase over an adoption rate of 9% in 2008, according to researchers at the Harvard School of Public Health.
- A study by University College London found that many EHR projects fail, and "the larger the project, the more likely it is to fail." Researchers say the systems can improve auditing and billing but may make primary clinical care less efficient.
- Experts from the Institute of Medicine who visited healthcare facilities last year found that "care providers had to flip among many screens and often among many systems to access data; in some cases, care providers found it easier to manage patient information printed or written on paper."

Healthcare CIOs say they're optimistic that IT can help to dramatically improve patient care, but it will take time. And the types of challenges that IT leaders face in all industries — such as high equipment costs and end-user resistance — could limit what IT can actually deliver and how fast it can do so.

"This is really going to take a lot of work and a lot of evolution. It's going to take a little bit of carrot, a little bit of stick and time to get there," says William Spooner, CIO at Sharp HealthCare in San Diego.

The U.S. government is providing the carrot and stick. The American Recovery and Reinvestment Act of 2009 provides $19 billion in incentives to health care providers that demonstrate they are engaged in "meaningful use" of EHR systems, but providers that don't meet the government's meaningful-use guidelines by 2015 face cuts in their Medicare reimbursements.

"Getting hospitals to start using EHRs is critical," says Ashish Jha, associate professor of health policy and management at Harvard. "Paper-based medical records lead to hundreds of thousands of errors each year in American hospitals and probably contribute to the deaths of tens of thousands of Americans. This is not acceptable. There is overwhelming evidence that EHRs can help, yet the expense and the disruption that implementing these systems can cause has forced many hospitals to move slowly."

One well-known reason for adopting EHR systems is that they could enable health professionals to access a patient's medical history anytime, anywhere. Such access would even be available to a doctor treating a patient who needs emergency care while far away from home.

In addition, Spooner says computerized systems can alert doctors immediately when a patient's lab results indicate something abnormal, allowing caregivers to act quickly to prevent complications. And some systems can compile patient data onto dashboards at hospital nurses' stations, so the nurses can see all information at once, rather than having to check charts room by room.

Analytics for Healthcare

Experts say that an even more powerful use of electronic records would be to analyze large groups of patients, track trends, identify best practices and determine the best treatments. "That's the ultimate goal: to discover patterns in the population you wouldn't otherwise," says David Muntz, CIO at Baylor Health Care System in Dallas.

» Stettheimer says data-sharing woes have slowed EHR adoption.

That's the goal, but we're far from it because of problems with data sharing, says Timothy Stettheimer, regional CIO at St. Vincent's Health System in Birmingham, Ala., and chairman of the board of trustees of the College of Healthcare Information Management Executives.

Not all healthcare providers have electronic records, many organizations

Continued on page 18

Cloud by Renoir, 1896

Cloud by SunGard, 2010

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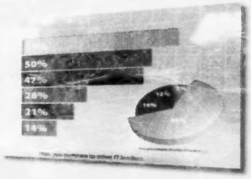

Take the Quick Poll and see how you rank in the cloud at: sungardas.com/cloud4

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SUNGARD AVAILABILITY SERVICES

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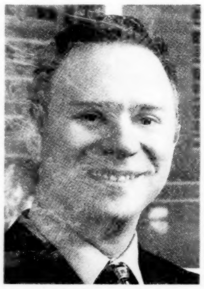

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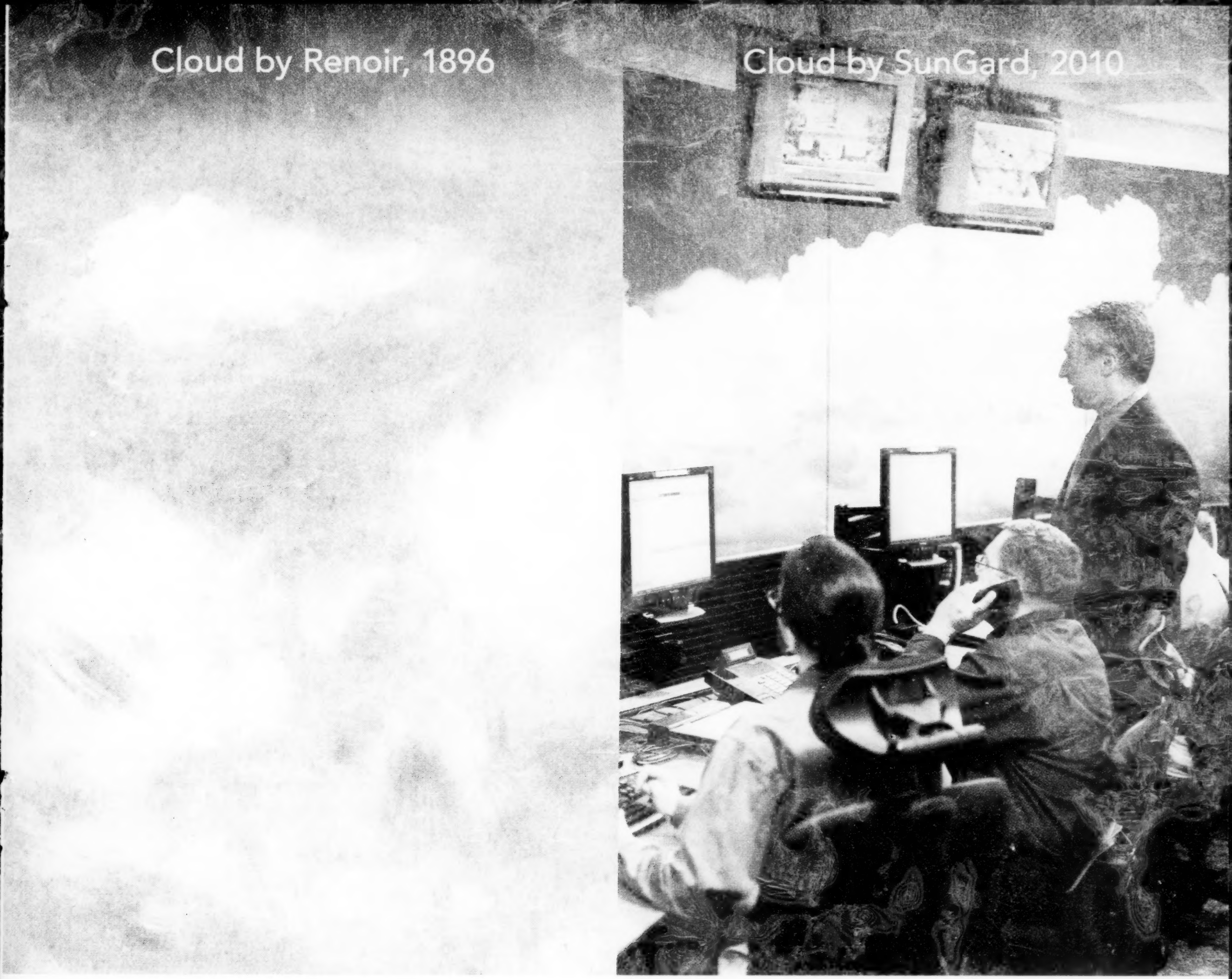
Continued on page 18



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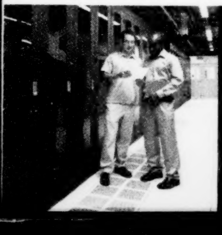

SUNGARD AVAILABILITY SERVICES

REPORT CARD:

Healthcare IT

We asked experts to give letter grades for the progress that IT has made so far in improving the following aspects of the U.S. healthcare system:

Using IT to improve the quality of patient care:

B+ *for the implementations*
A *for the technology that's available*
STETTHEIMER
B-
GRISKEWICZ

Using IT to lower the cost of care:

B- STETTHEIMER
B- GRISKEWICZ

Ensuring the privacy and security of electronic health records to help patients trust the system:

B+ *for the technological capabilities*
C+ *for gaining people's trust*
STETTHEIMER
B
GRISKEWICZ

Making healthcare computer systems affordable for smaller medical offices:

C STETTHEIMER
B GRISKEWICZ

Ensuring that the technology is usable enough for doctors and nurses to work with it easily and productively:

B- STETTHEIMER
B- GRISKEWICZ
D WILBUR

Sharing data among the various segments of the healthcare industry:

C+ STETTHEIMER
C- GRISKEWICZ

A *for the technology*
B *for the implementations*
C *for the adoption of available technology*
WILBUR

THE GRADERS:

- **Timothy Stettheimer,** regional CIO, St. Vincent's Health System
- **Mary Griskewicz,** senior director of ambulatory healthcare information systems, Healthcare Information and Management Systems Society
- **Bobbie Wilbur,** co-director, Social Interest Solutions

Continued from page 16

can't share their records with other facilities unless they're affiliated with one another, and even those that can share with others outside their networks often have translation problems because there's no single data standard to facilitate the smooth transfer of information.

"That's one of the things we're struggling with — the vocabularies, diagnostic codes, nomenclatures. There are a lot of them, and we're trying to bring them together," Stettheimer says. "There are a lot of efforts going on to create the ability to share information, but we're not there yet."

It may be 10 or 15 years before data sharing is widespread, because it's "a lot harder to achieve than most people appreciate," says Peter Gabriel, director of informatics at the University of Pennsylvania School of Medicine's Department of Radiation Oncology.

One looming issue is whether people will trust that their electronic medical records will remain secure and private while all this data sharing goes on. Polls show that consumers are concerned that employers and marketers might gain access to their health records, for example.

The counterargument is that electronic records can be more secure than paper ones. Many computerized health record systems already use multilevel access controls that can limit who can view specific information, and some provide audit trails that show who accessed what details when.

But still unresolved are questions about how patients' records will be handled — and how they want their records handled. Should they be able to opt into a system of shared electronic records, or should they have to opt out? And who will be the owners and custodians of the information — the patients themselves, or the caregivers or facilities that created the data?

Will IT Cut Medical Costs?

Healthcare IT professionals expect that technology will not only improve patient care, but also deliver savings, by streamlining processes and eliminating costly mistakes. "We have known since at the least the 1990s that the highest-quality care results in the lowest-cost care," says Aaron Seib, CEO of the National eHealth Collaborative, a public-private partnership promoting a nationwide health information system.

McNutt says her hospital's prescription bar-code system is an example of a cost-cutting technology. By eliminating drug errors, it cuts out the treatments that would have been needed if a patient had been given the wrong medicine. McNutt acknowledges that eliminating those treatments saves money for the insurer, not the hospital. But she also points out that the system helps the hospital avoid costly lawsuits stemming from drug errors.

As the government moves toward a new reimbursement model — one that pushes the cost of treating problems caused by poor care, such as hospital-acquired infections, back onto the providers — IT systems could deliver even bigger returns, McNutt says.

Still, there's a rub when it comes to calculating return on investment in healthcare IT. Often, the cost savings from the use of technology don't go to the owner of the technology but to another player in the healthcare system, like the insurers.

Stettheimer lays it out this way: A patient comes into the hospital at night with heart trouble. Rather than calling a local cardiologist and waiting for a response, the staff sends test results to offshore medical personnel for an immediate evaluation. That quicker response means treatment can start sooner, often leading to a better and less costly outcome. But in that case, the hospital doesn't necessarily see the financial benefit; the insurance company — and the healthcare system as a whole — does.

A CIO at a for-profit company would have a hard time getting approval for an IT investment that saves money for the industry but not for the company.

"The incentives [in healthcare] are not aligned at all. In fact, there are perverse incentives there," Stettheimer points out. "That's very simplified, but it's a problem we need to overcome."

New payment models will help healthcare facilities big and small see the financial rewards of investing in IT, he says. Medicaid and some other insurers are paying healthcare providers by the condition, rather than per treatment or per day in the hospital. Those payment arrangements give doctors and hospitals incentives to deliver the best, most efficient care.

The new payment schemes are more likely to save big bucks than IT advances alone would, Gabriel says. "I'm a big proponent of healthcare IT, but I don't see a lot of evidence that information technology will save the healthcare system money," he says.

The Affordability Factor

Many financially strapped medical facilities have a hard time generating the upfront capital required to invest in IT in the first place. The Harvard study found that small, rural and public hospitals have fallen behind larger, private and urban operations in adopting EHR systems, further widening the digital divide.

Even with the federal stimulus money — which is just a fraction of what's needed nationwide — access to capital for IT is a big concern for many medical providers, says Bobbie Wilbur, co-director of Social Interest Solutions, a nonprofit healthcare technology provider. "Affordability is complicated by so many factors. Some just don't have the money. Others might not make it a priority because other needs rank higher," Wilbur says.

Spooner says IT costs could force small, independent operations to seek partnerships or mergers with larger institutions. "Independent physician practices or hospitals may become a thing of the past," he says.

Of course, healthcare IT won't do any good if it isn't used effectively, or isn't used at all. CIOs and researchers continue to report pockets of resistance among doctors and nurses, who in turn blame kludgy computer systems and then resort to work-arounds that involve pens, paper and Post-it notes.

To some degree, this is a generational issue. More and more medical professionals, like people in other industries, have grown up with technology or are becoming more comfortable with it.

In the future, Spooner says, caregivers will have no choice but to use computers; they'll be viewed as incompetent if they don't.

A bigger problem than getting healthcare professionals to accept technology is that there's been too much emphasis on computers alone, and not enough focus on streamlining workflows and providing software that could help doctors make better medical decisions, according to an Institute of Medicine report released last year.

Researchers who visited leading healthcare facilities found that "IT applications appear designed largely to automate tasks or business processes. They are often designed in ways that simply mimic existing paper-based forms and provide little support for the cognitive tasks of clinicians or the workflow of the people who must actually use the system."

During the visits, researchers "repeatedly observed healthcare IT focused on individual transactions (e.g., medication *x* is given to the patient at 9:42 p.m., laboratory result *y* is returned to the physician, and so on) and virtually no attention being paid to helping the clinician understand how the voluminous data collected could relate to the overall healthcare status of any individual patient," the institute's report said.

There's been a lot of hype suggesting that the benefits of healthcare IT will show up quickly and automatically, Gabriel says. "Simply implementing computer systems won't dramatically improve [healthcare] quality overnight," he says. "Very careful system design and configuration, along with a lot of thoughtful human process improvement, are necessary in order to make the technology truly helpful." ◆

Pratt *is a* Computerworld *contributing writer in Waltham, Mass. You can contact her at marykpratt@verizon.net.* Computerworld's **Mitch Betts** *contributed to this article.*

Healthcare Reform and IT

1967-1973: The earliest electronic medical record systems are developed at the University of Vermont, Intermountain Healthcare in Utah, the Regenstrief Institute in Indiana, Kaiser Permanente in San Francisco, and Massachusetts General Hospital in Boston.

1991: An Institute of Medicine report calls for computerization of patient records by the year 2000.

1993: President Bill Clinton proposes a major healthcare reform plan, including a medical ID card, but it isn't enacted.

1997: The Health Insurance Portability and Accountability Act requires privacy and security safeguards for health records.

1999: Healthcare facilities scramble to prepare their systems for the Y2K date rollover.

2004: President George W. Bush sets a goal to make electronic health records available to most Americans in the next 10 years.

2009: Federal economic stimulus legislation encourages the adoption and "meaningful use" of electronic health records.

2009: A report by the Institute of Medicine urges the healthcare industry to increase its focus on using IT to improve clinical decision-making.

2010: President Barack Obama signs healthcare reform legislation that has numerous provisions affecting IT.

HOW TO ADD DEPTH TO YOUR BENCH

One or two star employees aren't enough. *Here's how smart IT managers identify and groom the strong tech team members of tomorrow.* **BY CARA GARRETSON**

THE POTENTIAL for losing tech talent is on the rise these days. Thanks to an uptick in IT hiring and an increase in retirements among baby boomers, your A-team employee lineup may be in danger.

Rather than getting caught without star performers, you must constantly think in terms of establishing bench depth and grooming the key players of tomorrow, CIOs and other experts say. But with so much on IT managers' plates these days, it can be hard to make succession planning a top priority.

However, while "succession planning" or "bench strength" may not resonate much with IT managers, the concept of risk mitigation does, says Diane Morello, an IT management analyst at Gartner Inc.

When succession planning is put in terms of what's at risk — the smooth operation and future development of IT systems that are indispensable to the company — IT managers become more willing to make the time to identify rising stars and provide the necessary training, education and mentoring for tomorrow's leaders. And once that priority is established at the CIO level, Morello says, succession planning becomes a priority more readily

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throughout the rest of the department.

At Prudential Financial, CIO Barbara Koster is keenly aware of the risk to the IT department's credibility, should some key talent retire or be hired away.

"Succession planning in the IT department is critical, because you want to make sure the business is always prepared and protected. We can never be in a position where we're leaving the business worried about getting the support they need," says Koster, who manages some 2,200 tech employees in the U.S. "You want the business to feel very confident that you have it covered."

Succession planning is particularly important in high tech because the field is so specialized, CIOs say. The high level of technical expertise often required for IT jobs limits the potential talent pool when managers are looking to hire internally from another department.

And often IT leaders will find that a proportion of workers with a certain set of skills — Web development, systems architecture, network design — aren't interested in developing the nontechnical skills required for a management position.

"IT skills and people skills don't really go together, so it becomes hard to identify and develop those soft skills," says Dan McCarthy, a corporate leadership developer who writes the Great Leadership blog.

To be sure, high performers who don't want to move into management are still essential to the organization, and management experts say the key to retaining such employees is to ensure that they receive support and training in the latest technologies and are given interesting, challenging projects.

As for the employees who do show leadership potential, McCarthy and other industry watchers recommend that IT managers scout them out early in their careers and shepherd them along accordingly.

Identifying Top Talent

The key to maintaining departmentwide continuity and reliability is identifying not just the stars of tomorrow, but going a few levels deeper to scope out employees with the potential to step up to the plate years from now.

At Prudential, as part of the company's succession planning and management program, managers in IT and other areas are instructed to look for three types of rising stars: next-generation leaders who currently exhibit the required skills to step into management; emerging leaders who have good technical skills and, with grooming, could become leaders within a few years; and employees who work well with management and in teams — those with soft skills that can blossom into full-blown management potential.

Equally important is recognizing those skilled workers who want to advance in the company but not into management — for example, a junior Web developer who wants to amass the training and experience to become a senior Web developer, or an application developer who is seeking a new challenge and wants to learn different IT skills. While these employees aren't on the management track, they still require care and feeding.

"Some people say 'I really don't have the desire to manage, I really just want to hone my technical skills,' or 'I really love being a Web developer,' and if that's what they want to do, you have to respect that," says Koster. "Putting them into something they don't want to do can hurt them."

IT leadership works on filling in gaps by providing potential managers with appropriate training, education and mentoring, says Koster. The multitasking millennial generation, for example, has much to contribute, but also much to learn. "The way they multitask is phenomenal; it increases productivity," says Koster. "We're incorporating things [from them] and putting those into the Prudential model. But they're also learning about the [company's] history and how our products work."

> "I have people on my team who are very talented. **They could walk in and no one would miss me.** I like to think I'm irreplaceable, but I'm not."
>
> **BECKY BLALOCK,**
> CIO, SOUTHERN CO.

SUCCESSION PLANNING 101

DEFINITION: Succession planning ensures that vital positions in an organization have qualified internal candidates ready to step into key roles, reducing the risk of business disruption from talent loss.

BEST PRACTICES: Think about positions two to three years into the future and tie succession planning to the organization's long-term goals. Companies typically do this for top executives, but they should also identify hard-to-replace technical people like IT specialists and engineers. Managers should assess whether candidates are ready to move up, identify any skill gaps, and provide training and/or special assignments to fill those gaps.

TOOLS: There are "talent management" software products that attempt to automate the process by giving managers a place to define job requirements, collect information about potential candidates and match potential candidates to higher-level jobs.

SOURCE: FORRESTER RESEARCH INC.

LEARN TO SPOT A GOOD BENCH PLAYER

One aspect of succession planning that isn't difficult is spotting up-and-comers in the organization, says Dennis Aebersold, vice president for IT and CIO at the University of Oklahoma.

"If you asked my team how I identify rising stars, they would all say one word: sparkle. How do you identify sparkle? You just know it," says Aebersold, who is in charge of the university's CIO Rising Stars program. That initiative aims to identify two individuals each year who, with exposure to IT leadership, could become leaders themselves.

These employees attend leadership team meetings and are involved in discussions about staff development, strategic planning, organizational priorities, and planning and building key relationships.

In addition, the university offers development programs for training and formal coaching, where IT professionals are appointed to lead peer coaching groups. And separately, the university's internship program gives student-employees hands-on experience in areas such as ERP, database management, mobile development, networking and security, says Aebersold.

Alwin Brunner, CIO at Heidrick & Struggles, an executive search firm in Chicago, says he has never groomed someone for advancement who turned out not to be interested. "You pick the people for leadership who are volunteering for new assignments. You can see it and feel it when you dialog with them," he says.

Future leaders "are passionate and hungry to learn more — and not just about technology," agrees Aebersold. "These are people who constantly expand their experiences and are not afraid to step outside of their comfort zone."

– CARA GARRETSON

There's at least one latent benefit of nurturing multiple layers of potential leaders at different stages in their careers. If the company decides to change its business focus, management can leverage new IT talent quickly and reassign positions to support that new emphasis, says Koster. "You think you're operating with one set of objectives, but things change," she says. "You need to know your talent very well throughout the year if you're going to put a team together quickly."

Setting Realistic Expectations

Employees at Atlanta-based Southern Co., which produces energy and owns electric utilities in four states, tend to spend their entire careers there, says CIO Becky Blalock. That happens at a lot of utility companies, she notes.

While this continuity benefits the company, the downside is that entire swaths of people can end up retiring at the same time, says Blalock. Currently, the average age among the company's 1,100-strong IT staff is 44, and many workers are reaching the minimum retirement age, which can be as early as 50 with the appropriate accredited service.

To deal with retirement and other staffing changes, the company has what Blalock describes as a very robust succession-planning process. For example, every year Blalock is asked by her superiors to list five employees who could replace her "if I'm run over by a truck tomorrow," she says. She breaks this list into potential replacements who are ready today, and those who could be ready in a year or two.

"I have some people on my team on that list that are very talented. They could walk in and no one would miss me," Blalock says. "I like to think I'm irreplaceable, but I'm not."

As part of the succession planning process, Southern's management team informs employees who have been earmarked for future leadership positions about its plans for them. That policy can backfire if a staffer becomes overconfident, but it's better than investing time in training and grooming an employee who doesn't really have an interest in taking on a leadership role, says Blalock.

"We tell them there are no guarantees or promises, this is just an opportunity," she says. Rising stars are enrolled in the company's leadership development programs and are given mentors to help them get the corporate coaching they need to move up.

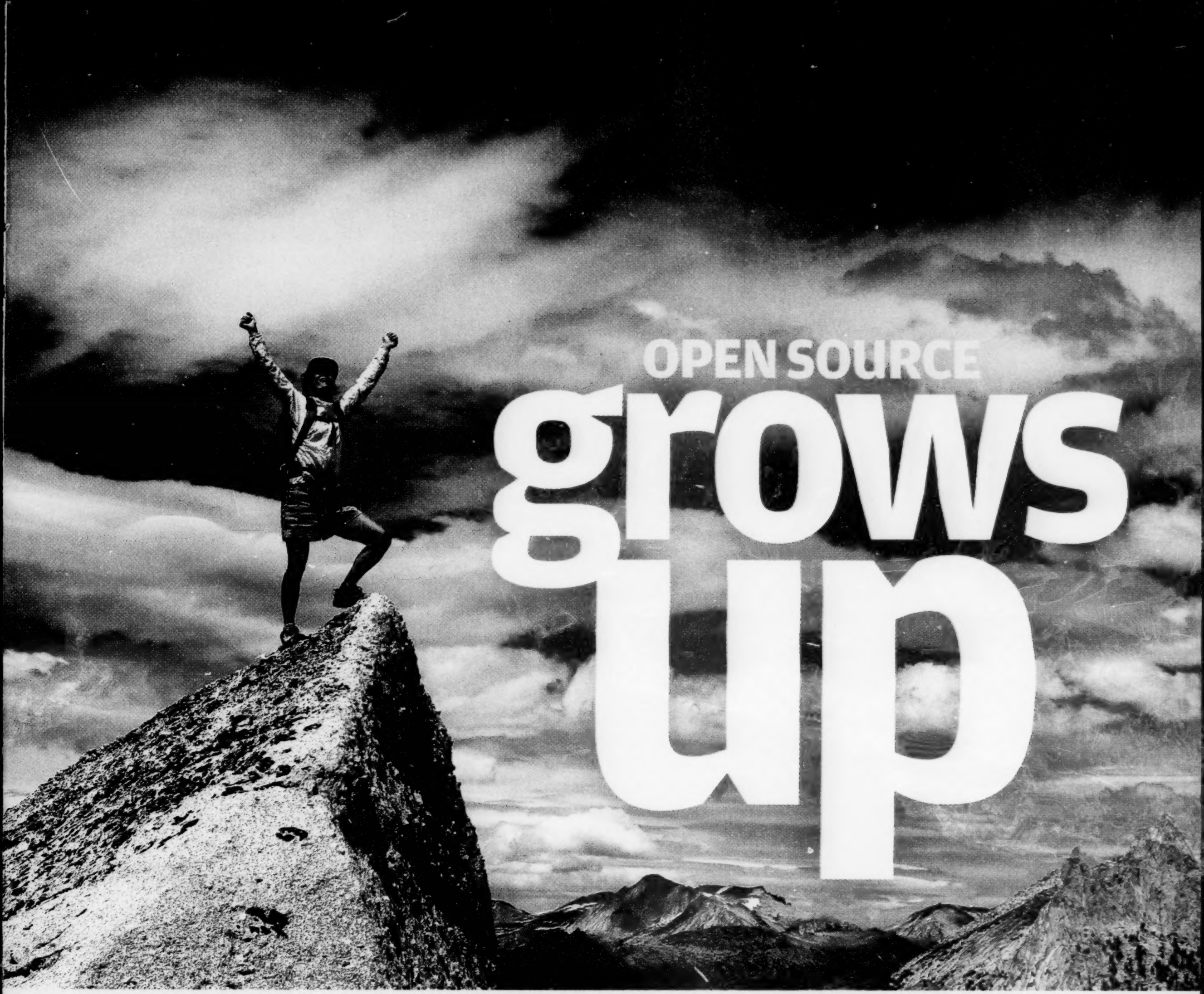
Blalock also encourages employees in her department to take positions in different parts of the company to help them learn the business. If they return to the IT department at a later point, they'll bring that deeper understanding with them, she says.

At the University of Oklahoma, the IT shop is like the IT groups at many other organizations — it tends to "get distracted by the immediate," says Dennis Aebersold, CIO and vice president of IT. Nonetheless, he adds, "succession planning and organizational development will always be high on my agenda. Our development programs, combined with the coaching that supports those programs, make succession planning a continual process for us."

If you're still tempted to let succession planning slide to the bottom of your to-do list, consider this: IT organizations that encourage layers of succession planning and workforce development enjoy more success as a department, says Gartner's Morello. And Gartner's studies show that CIOs who emphasize strategic workforce development tend to be highly successful executives, while those who don't are much less successful, says Morello.

In other words, if you want to be a winning tech exec, you need a good team to back you up. ◆

Garretson *is a freelance writer in the Washington, D.C., area. Contact her at caragarretson@gmail.com.*



OPEN SOURCE grows up

Companies are embracing open-source software **because of its quality** – not just cost savings.

BY STACY COLLETT

JIM WENNER isn't an open-source evangelist — he's just practical.

Three years ago, the director of IT wasn't looking for the Cadillac of business intelligence software. Wenner only needed to run queries and reports for $4.9 billion convenience-store chain Sheetz Inc. After investigating his options, he chose a relatively new open-source BI suite from Pentaho Corp. over better-known products because the reporting functions met his needs and there were undeniable cost savings.

Of course, the ever-practical Wenner also hedged his bet: "We gave ourselves enough time that if six to nine months down the road we were going down the wrong path, we would be able to replace it with something else," he says.

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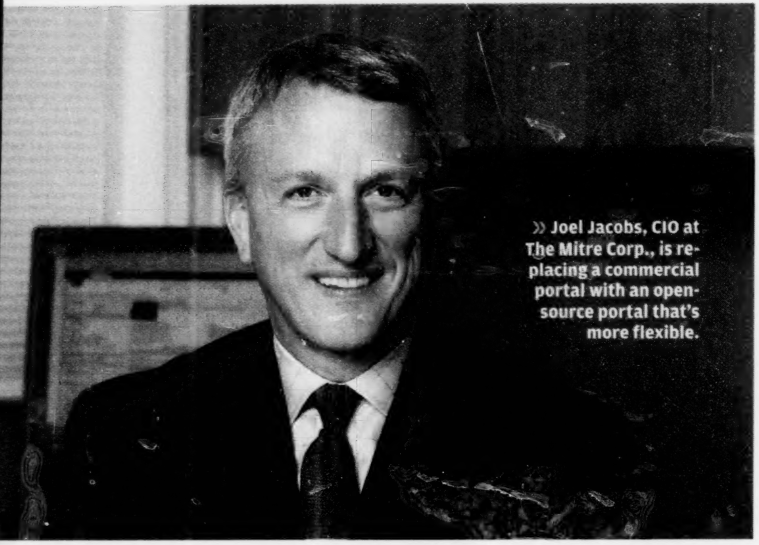


» Joel Jacobs, CIO at The Mitre Corp., is replacing a commercial portal with an open-source portal that's more flexible.

Two years into the relationship, Sheetz and the open-source software vendor are still together, though there were some "learning curve challenges with developers" that required assistance from the vendor, Wenner says. He's saving about $50,000 annually on software costs alone.

"We're not open-source zealots," Wenner says. "We're just trying to be wise with our dollars and technology decisions."

It's clear that open-source software has moved beyond the zealotry phase. In a recent survey by consulting firm Accenture PLC, 50% of the 300 large organizations polled said they are already fully committed to using open-source software, while another 28% said they're experimenting with it. More than two-thirds (69%) of the respondents said they expect to increase their investments in open source.

Open-source adoption is broadest and deepest at lower levels of the infrastructure, but it's "moving up the stack," says Paul Daugherty, Accenture's chief technology architect. "It's very common for clients to be using it in Web servers and Web applications. Many companies are looking at open-source-based integration, frameworks and middleware types of products. Some companies are committing to open-source applications for business intelligence, portal development and content management."

Tipping Point

The most striking finding of the Accenture survey is that the organizations polled said that their top reasons for using open-source software were quality, reliability and security. Those factors all came in ahead of cost savings, which previously had been the dominant driver of open-source use.

Daugherty says he sees that as "a sign that maybe open source is coming of age, and that people are really making the evaluations on a functions, features and capabilities basis as much as they are on a cost basis."

IT managers also seem at ease with security, figuring that the open-source community provides thousands of eyes to detect and solve security problems. With such a large user community, "there are always technical resources out there to rise to the challenge," says Joseph Koblich, director of IT at the American Nuclear Society in LaGrange Park, Ill.

Koblich and his IT staff built an in-house electronic document workflow system using open-source tools such as MySQL, and they have used Linux servers for more than a decade.

Sometimes open-source software is just more flexible than commercial packages. The Mitre Corp. has been experimenting with open-source software for two years, most recently for its in-house social network application, Handshake. So when the Bedford, Mass.-based firm needed more flexibility in an intranet portal interface than its current commercial package could provide, open source was a logical option.

CIO Joel Jacobs wanted greater control over the pace of evolution. "We were not able to make changes to the commercial portal as quickly as we would like," he says. "So we moved to an open-source platform with an agile development approach with short, fixed-length development releases and continuous feedback from our user population."

The IT team conducted a six-month experiment to build a platform using open-source software that would be more flexible than its commercial portal interface but would have the same features. The project proved successful, and the open-source portal will replace the commercial platform by year's end.

"Six years ago, we wouldn't have considered that. It's a pretty significant change in our philosophy," Jacobs says. He adds that Mitre isn't likely to replace its HR or finance systems with open-source software anytime soon, "but when it comes to user-facing Web services and things like that, we'll definitely keep an eye out for [open-source options]."

Research firm Gartner Inc. has long predicted that open-source software would go mainstream. But Gartner analyst Mark Driver also cautions that the maturity and capabilities of open-source products vary greatly, as do the communities of users and

> **We're not open-source zealots. We're just trying to be wise with our dollars and technology decisions.**
>
> **JIM WENNER,** DIRECTOR OF IT, SHEETZ INC.

developers who support them. Expecting success from every open-source venture will inevitably lead to disappointment, he says.

"I see it every day. Organizations say, 'We've saved tons [of money] on Linux, and we were very happy. So we decided to throw out DB2 and Oracle [for open source], and we're just dying!' They're leveraging open source and not sufficiently taking into account risk management," Driver says. "They're downloading this stuff off the Internet, not engaging with the vendor, assuming it won't crash or they'll be able to debug it or just Google the answer on the Internet. Oftentimes that's just not the case."

BIGGEST BENEFITS

Asked about the key benefits of open-source software, managers cited the following:

Quality: 76%

Reliability: 71%

Security: 70%

Lower total cost of ownership: 50%

SOURCE: AUGUST 2010 ACCENTURE PLC SURVEY OF EXECUTIVES AT 300 ORGANIZATIONS IN THE U.S. AND THE U.K.; MULTIPLE RESPONSES ALLOWED.

For those reasons, Accenture advises its clients to use vendor-supported versions of open-source software. "That gives you the ability to get access to the right capabilities and support," Daugherty says.

It's one thing to dabble in open source, but one-third of the Accenture survey respondents said they expect to migrate mission-critical operations to open-source software by next fall, with high-tech and financial services companies leading the way.

"The financial services sector has such a high investment in IT, so you do see them adopting early," Daugherty says. Public service and government organizations are also early adopters, in part because of their need for multiagency collaboration.

David O'Berry remembers when open source was considered renegade, uncontrollable and a poor fit for enterprise use. Five years ago, the South Carolina government was "considering writing a policy to prohibit or at least 'control' open source," recalls the director of IT at the South Carolina Department of Probation, Parole and Pardon Services. "Now it has really turned around," he says. Government leaders now say, "Whatever solves the problem, and solves it in the most operationally efficient manner, is what we're interested in."

Companies like Mitre, however, will take a slower approach to using open source for mission-critical tasks. "There are places where we can't afford an outage or uncertainty, and we need to have significant recourse if we have a big issue," Jacobs says. "There, we'll still be leaning toward a commercial package with commercial support."

Governance Required

Not long ago, open-source software entered the enterprise through the back door, with no formal management support or planning. Now, 65% of open-source users have a fully documented strategic plan for using open source in their businesses, while 32% are developing such plans, according to the Accenture survey.

Companies should also have governance plans to manage open-source use and calculate the true costs and benefits.

"Without governance, you have wild speculation. It's impossible to get a firm, realistic, quantitative metric on ROI and TCO advantages. In many cases, open-source users are basing their entire assumption for TCO on acquisition costs," Driver says, without taking into account the costs for hardware, consulting and training. The Accenture survey found that the No. 1 challenge for users of open-source software is training in-house developers.

Some organizations are still hesitant to adopt open-source software and can't get senior executive approval. But that's not a problem for Sheetz, which continues to wring value from Pentaho's open-source reporting software. "Two years ago, they were probably 70% of our established BI tools. Now they're probably 85%, [and] in a couple years they'll probably be 95%," Wenner says. "They continue to upgrade their model, and they're working their way to Cadillac [status]." ◆

Collett *is a* Computerworld *contributing writer. Contact her at stcollett@aol.com.*

Many Enterprises Aren't Giving Back

A fundamental expectation of the open-source software model is that developers will share code with the rest of the community. But in an Accenture survey of 300 organizations, only 29% of the respondents said that they're willing to contribute their code back to the community.

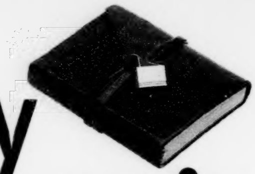
WHY ARE SO FEW SHARING? Large enterprises figure that the code they develop is intellectual property that provides a competitive advantage, says Paul Daugherty, chief technology architect at Accenture.

Enterprises aren't likely to loosen their grip on intellectual property anytime soon, especially if they migrate mission-critical applications to open source, Daugherty adds. But as they mature in open-source experience and see the benefits of sharing with the open-source community, they'll be more likely to contribute.

Financial giant JPMorgan Chase Bank Inc. was an early contributor to the open-source community. For example, JPMorgan co-developed the Advanced Message Queuing Protocol for its internal needs but turned the code over to a working group for further development as an open standard. Now the protocol shows up in products such as Red Hat Inc.'s Enterprise MRG messaging middleware.

The advantage for the enterprise is that software maintenance costs are lower when the code is provided to the open-source community for updating and enhancing. Daugherty says it's an example of a company thinking more strategically about the benefits of open source.

– STACY COLLETT



Security Manager's Journal

MATHIAS THURMAN

Heading for the Clouds

Our manager wanted a new challenge. His new job at a company that is offering software as a service fills the bill.

Trouble Ticket

» At issue: Our manager has a new job, in which he will be heading up information security at a SaaS provider.

» Action plan: Get up to speed quickly, and make connections with all the departments that can affect the company's security.

JOIN IN the discussions about security! **computerworld.com/blogs/security**

WHAT MAKES a good information security professional? I think it's starting at the bottom and working your way up, occupying various positions along the way and obtaining skills in every one of them. It's understanding the business and having the ability to influence others. It's having a breadth of knowledge in various business sectors.

I've been thinking about all of this because I've taken a new position, leaving a company I worked at for more than five years. Did I hate my job? No. Did the company make me do risky things? Never. Did I hate my boss, or the people I worked with? Not at all. Was I kept from succeeding? No, in fact, there were no negatives driving me to leave.

Admittedly, my new job comes with a promotion and a pay raise, but that's not what clinched it for me. It was a chance for a new challenge, to work in a different technology sector and to build something — all those things that go into making a good security pro.

I gave two weeks' notice and spent that time closing some open items, such as the Sarbanes-Oxley review and a firewall rule audit, and I created a transition plan. I think one thing a good security manager does is make sure that his successor steps into a mature environment, with a clear understanding of the burning issues. I created a spreadsheet listing significant areas of the company's security profile, prioritizing them, providing the names of the best contacts for each issue, and describing the details.

Today was my third day on the new job. My main goal in these first days is to map out the company's current security landscape. I'll then spend the next few weeks assessing it and prioritizing actions. Meanwhile, of course, there are all those things that anyone encounters in a new job: learning names and terminology, understanding a new business model and becoming familiar with the products and services that the company sells.

Upon arrival at my new company, I found that my predecessor had in turn left me with an eight-page transition plan. I've only gotten through two pages so far, but already I know that some burning issues will need to be addressed quickly. The first is hiring a security analyst to take charge of an event-monitoring project that is under way. If I don't do it before the end of the year, I'll lose the budget.

> **“My main goal in these first days is to map out the company's current security landscape.**

New Security Horizons

My new company has, over the past couple of years, moved from selling software that customers run on-premises to offering software as a service. It has also embraced cloud technologies to run the business. So I will be going well beyond my previous cloud experience, which consisted of assessing vendors, to help build the security of a company whose customers rely on it to keep data secure in the cloud.

To do this, I will need to work with the IT department in building a robust security program and ensuring that the security infrastructure is sound, that appropriate policies and processes are in place and that those policies are being followed. I will also connect with the company's marketing, sales and legal departments to help build marketing collateral and to offer my assistance whenever our customers have questions about the security of our infrastructure. Then I'll want to check in with product development to review the security of our product offerings.

I said I wanted a new challenge, and it looks like I have one. I look forward to sharing my new experiences with my readers. ◆

This week's journal is written by a real security manager, **"Mathias Thurman,"** *whose name and employer have been disguised for obvious reasons. Contact him at mathias_thurman@yahoo.com.*

OPINION

PAUL GLEN

Moving Morale

Saying that a group has low morale is mostly identifying what the group is not – meaning, positively engaged with their work.

"THE MORALE OF OUR PEOPLE is just terrible," the CTO of a government agency recently confided in me. "What can I do about it?" he asked.

I'm sure that he's not alone. Hit by deep layoffs over the past few years, some workplaces look as if they are populated by the walking dead. Many survivors feel overwhelmed just keeping the existing systems running, and there's nothing new or exciting on the horizon to look forward to.

What's a manager to do?

First, you need to be more articulate about the emotional state of your people. Saying that a group has low morale is mostly identifying what the group is not — meaning, positively engaged with their work. But there are many different types of groups in this category, including these:

- **Passively disengaged.** People in these groups are listless and lack drive. They have no enthusiasm for anything and are often driven by fear.
- **Actively repelled.** Groups of actively repelled employees are more energetic, but they're animated by hostilities they harbor toward their manager, rival factions, the organization or the universe.
- **Passionately destructive.** These groups are made up of people who aren't demotivated at all. They're actually highly motivated — by rage. Think terrorists.

What to Do

Strategies for dealing with each type differ.

The last first: For the passionately destructive, eradication is the only effective approach. You can't reason with the enraged. Luckily, in a work setting, only a few people generally drive the anger, and eradicating them will tone down the group to the point where it's merely hostile.

For the actively repelled, you need to find the source of their anger. They will tell you of specific grievances, but don't accept those at face value. The things that people feel safe to talk about rarely represent the full story. Look for themes. Something with deeper resonance underlies those vocalized concerns. For example, someone who says he feels underpaid might really feel unfairly treated or unappreciated. Look for the emotions, not just the facts. If you can't address the source of the anger, you need to at least acknowledge it openly and make it a safe topic for discussion.

With the passively disengaged, you need to assess your own emotional reaction to their feelings. The people you manage resonate with your emotions. Are you incredulous, feeling that they should be grateful to have jobs, quit griping and get to work? If so, they're likely to respond with incredulity of their own, and feel that you are rejecting, rather than acknowledging, their feelings.

Do you respond with a feeling of helplessness, wondering what they want from you? If so, they will feel even more helpless than they already do. In times of uncertainty, they are looking for clarity, and if you can't provide it, they will look elsewhere.

Do you respond with determination, declaring that you all have a job to do regardless of the circumstances? In that case, your people will either join in with your determination, or they will completely reject your interpretation of reality. There's rarely much in between. Your enthusiasm will either be infectious or repellent.

The key to managing low morale lies in understanding both yourself and the group and thinking carefully about how to walk your people back from where they are to where you'd like them to be. ◆

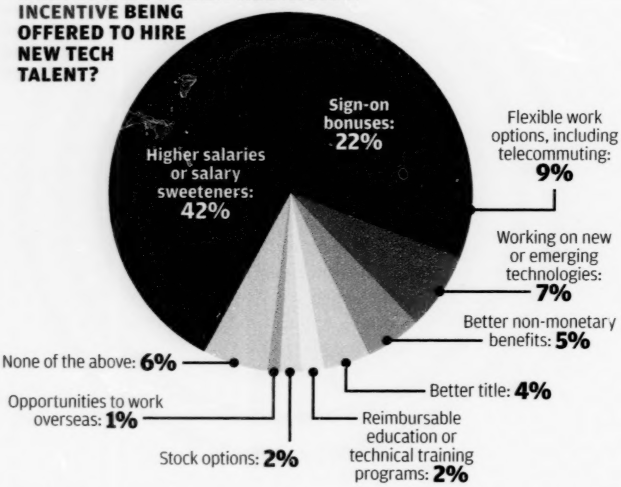
Paul Glen is a consultant who helps technical organizations improve productivity through leadership, and the author of the award-winning book *Leading Geeks* (Jossey-Bass, 2003). You can contact him at info@paulglen.com.

Career Watch

TECH WORKERS BECOMING Choosy

Things are loosening up enough in the tech job market that companies are finding that they have to provide better incentives to lure the talent they want. In a Dice.com survey of 1,350 recruiters and employers, nearly one-third of the respondents said that in the third quarter, they had to sweeten the pot when seeking to hire new talent.

WHAT IS THE PRIMARY ADDITIONAL INCENTIVE BEING OFFERED TO HIRE NEW TECH TALENT?



SOURCE: THE DICE REPORT, SEPTEMBER 2010

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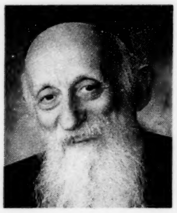


Q&A

Abraham J. Twerski

With job loss still an issue for many, the **Pittsburgh psychiatrist** *discusses the psychic importance of being employed.*

What happens in the psyche of a person who has lost a job? Several things happen when a person loses his job. First of all, of course, there is the financial worry. But that worry would exist if a person had *quit* his job. Being laid off adds a sense of loss of control of one's life. It is also a terrible ego blow to be unable to provide for one's family. One may brood, lose a sense of worth and become clinically depressed. A person may panic and lose a sense of good judgment. One may become irritable and angry and damage family relationships.

A person may feel helpless, or that the world is against him, and may not have trust in himself that he can survive and even prosper. One may resort to drinking to escape feeling depressed, or may try to get money by gambling.

How can someone who is unemployed for an extended period overcome the negativity in his own mind? A person must realize that one has great value as a husband, wife, parent, sibling. Indeed, one must know that one has value as a human being even if one is not able to be productive.

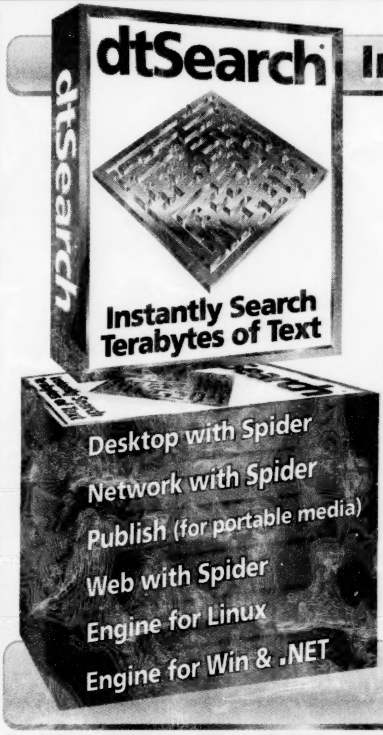
"Creative visualization," seeing oneself in favorable circumstances, may lift one's spirits and make a person more alert for job opportunities. Also, one may discover skills not noted when working 9 to 5. There are many accounts of success growing out of adversity. Grandma Moses' paintings sell for many thousands of dollars. She did not discover her artistic talents until her mid-70s, when arthritis precluded her doing needlework.

Exercising and practicing yoga can improve one's state of mind. Family bonds should be strengthened. Parents have more time to spend with their children. Mealtime should be enjoyed together. Make a list of things one can be grateful for even if one has no job. Make a list of the positive things one does, for the family and for others.

I saw people who lost their jobs watch the Super Bowl and cheer when their team scored a touchdown. Being laid off did not deprive them of the ability to enjoy things. One must look for things to enjoy, especially together with family and friends.

Do we make a mistake if we define ourselves too much by our professional successes and failures? Our personal value should be determined by how we live, ethically and morally. We err in identifying ourselves primarily by our work. Ask someone to tell you about himself. He is unlikely to say, "I am a devoted husband and father. I am a friendly person. I enjoy music and art. I attend church regularly." Rather, he will say, "I am a lawyer" or "I am an accountant." If that is primarily what one is, then losing one's job is losing oneself.

– JAMIE ECKLE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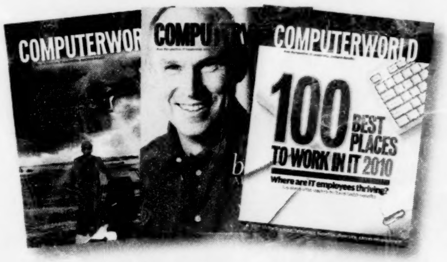
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Synertech Inc in Orange CA seeks a Software Eng with Bach in Comp Sci or Mech Eng and 5 yrs exp designing, developing, and testing large software apps. Mail resume to Joe Neria CEO at 1241 W Collins Ave Orange CA 92867

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And Other Duties as Assigned

Pilot fish works in the executive support group for this global company, and he's in the know about a call his manager gets from the CIO, which goes something like this: CIO: "Executive X left his passport at the airport last night and flew to Panama without it." Manager: "OK . . ." CIO: "The passport is being sent to the home office. It's being sent overnight, should be there in the morning." Manager: "OK, what should I do with it, courier it to Executive X?" CIO: "No, have a desktop tech buy a plane ticket, fly to Panama and hand-deliver it to Executive X."

If You Have to Ask . . .

Project manager pilot fish is responsible for a business intelligence project that's going to require some work by an outside vendor – one highly recommended by fish's bosses. When the vendor's proposal arrives, it has a detailed breakdown of hardware and licensing costs, but "professional services" is a single line – and it makes up 40% of the price quoted. "No itemization of tasks or quantification of time in any way," says fish. "Nothing except one line." And that's a six-digit line, so fish fires an e-mail back, asking for a breakdown of the professional services costs, so she can build them into the project plan. "The vendor replied, stating there was very little they could do until I signed the contract," fish says. "According to them, the project implementation plan customization was part of the professional services, which would not commence until the contract was in place."

Yes, All of Them

This company has been standardizing its accounting software, and the last region to get on the new system is the Southwest. "When the new system was installed, they underwent training but still didn't use it for months, as they preferred their old homegrown system, which was written by an engineer who had long left the company," says a pilot fish on the scene. But eventually the Southwest guys explain they *can't* use the new system because it doesn't contain their client data. Fish is tasked with writing a custom program to import the client data. After another meeting or two to nail down the specs for the data-import program, fish finally receives a spreadsheet – one that contains exactly four rows of data. "I responded that this was good test data, but I would need all of their data so I could import it into a test database," fish says. "I soon received a response assuring me that the spreadsheet I had contained all of their clients."

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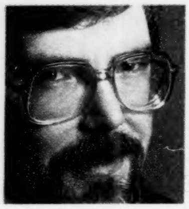

OPINION

FRANK HAYES

Big Projects, Done Small

OK, ALL TOGETHER NOW: *Small IT projects succeed; huge IT projects fail.* We all know that tune. The latest voice to join the choir is that of Roger Sessions, CTO at ObjectWatch, who has patented a methodology for breaking big projects into small pieces. There's just one problem: In the real world, big projects are big winners.

It's true. And that's a real pain, because Sessions and everyone else in the "huge projects fail" chorus is absolutely correct. We've known that ever since Fred Brooks wrote *The Mythical Man-Month* in 1975. Since then, the data has piled up. Sessions quotes recent research that says sub-million-dollar IT projects have a better-than-75% success rate. Once the budget passes $10 million, the chance of success drops below 10%. Ouch.

The logical conclusion: We should break up all IT projects into sub-million-dollar pieces.

The political reality: Everybody wants multimillion-dollar behemoths.

The CEO wants them. They make for great bragging points on the golf course, and they provide cover for "restructurings" of all kinds. Line-of-business executives want them because they look great on résumés. Ambitious project managers want them because in corporate politics, dollars are how you keep score — a dozen $200k projects that succeed aren't nearly as impressive as a single $20 million Goliath, no matter how it ends up.

That means huge projects get big political support. That, in turn, makes them harder to kill. A multiyear megaproject that has the CEO's backing and millions sunk into it already is much likelier to survive at budget-cutting time than a bunch of trim, effective, quick-hit projects that could be cutting costs or selling more products within months but just don't have so many zeros at the end of the price.

If that megaproject is ever finished, it will probably be years late and tens of millions of dollars over budget. And even *that* weighs in its favor: It just makes the project look that much more impressive.

No matter how much we sing the praises of small projects, all the incentives that matter push for ever-bigger projects. That's why we keep doing them.

We can't change the politics. So maybe we should just decide to do big IT projects — but do them small.

Look, what have software gurus been telling us for decades? *Small succeeds.* But those gurus nearly always tell us to break big projects down into small projects. That's technically sound but politically naive. It's where all those easy-to-cancel small projects come from.

Instead, we can continue to *talk* about big projects — but we should plan them by breaking them down into small pieces.

There's no need for the CEO to know the implementation details. That $50 million project will still take years. The fact that it will be built of independent sub-million-dollar projects — er, *modules* — that will start doing something useful much sooner is just a nice bonus.

In fact, let's keep that IT's little secret about huge projects.

Does this sound devious and political? Of course. Hey, everyone says IT should be run like the rest of the business, right?

So propose big and build small. It's politically attractive, technically effective — and everyone comes out ahead.

Otherwise, we can talk all we want about how small projects succeed and huge projects fail. But we'll just be preaching to the choir. ◆

Sub-million-dollar IT projects have a better-than-75% success rate. Once the budget passes $10 million, the chance of success drops below 10%. Ouch.

Frank Hayes has been covering the intersection of business and IT for three decades. Contact him at cw@frankhayes.com.

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